

RECENT PAPERS BEARING ON METEOROLOGY AND SEISMOLOGY

The following titles have been selected from the contents of the periodicals and serials recently received in the library of the Weather Bureau. The titles selected are of papers and other communications bearing on meteorology and cognate branches of science. This is not a complete index of all the journals from which it has been compiled. It shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau.

- American journal of science. New Haven.* (5) v. 8. October, 1924.
Visher, S. S. Sun spots and the frequency of tropical cyclones. p. 312-316.
- American mercury. N. Y.* v. 9. November, 1924.
Talman, Charles Fitzhugh. The new outlook in weather forecasting. p. 333-335.
- American meteorological society. Bulletin. Worcester, Mass.* v. 5. 1924.
Blake, Dean. Anticyclonic weather in California. p. 127-128. (Aug.-Sept.) [Abstract.]
Gibblett, M. A., Richardson, L. F., & Whipple, F. J. W. Meteorological observations while crossing the Atlantic from England. p. 121-122. (Aug.-Sept.) [Abstract.]
Gregory, J. W. Inter-racial problems and white colonization in the tropics. p. 113-118. (Aug.-Sept.)
Kincer, J. B. The adjustment of agriculture to climate. p. 123-125. (Aug.-Sept.) [Abstract.]
McLennan, J. C. Recent developments in low temperature research. p. 120-121. (Aug.-Sept.) [Abstract. Deals with Vegard's studies of the aurora.]
Shaw, Sir [William] Napier. If the earth went dry. p. 119-120. (Aug.-Sept.) [Abstract.]
Stupart, Sir Frederic. The variableness of Canadian winters. p. 120. (Aug.-Sept.) [Abstract.]
Wells, Edward L. The climate of Portland, Oregon. p. 126. (Aug.-Sept.) [Abstract.]
Whipple, F. J. W. An experiment illustrating the theory of the green flash. p. 119. (Aug.-Sept.) [Abstract.]
Alps, H. F. Seasonal densities and storage of snowfall. p. 147. (Oct.) [Abstract.]
Bjerknes, J. The importance of atmospheric discontinuities for practical and theoretical weather forecasting. p. 148-149. (Oct.) [Abstract.]
Cornish, Vaughan. Wind, wave, and swell on the North Atlantic Ocean. p. 151-152. (Oct.) [Abstract.]
Grant, Robert Q. Some climatic features of Arizona. p. 146-147. (Oct.) [Abstract.]
Humphreys, W. J. The relation of wind to height. p. 148. (Oct.) [Abstract.]
Kimball, H. H. The determination of daylight intensity from automatic records of total solar and sky radiation. p. 150. (Oct.) [Abstract.]
McEwen, George F. Forecasting seasonal rainfall from ocean temperatures. Indications for the 1924-1925 season in Southern California. p. 137-139. (Oct.)
Marvin, C. F. Let us simplify the calendar and publish statistical data in standardized summaries. p. 150-151. (Oct.) [Abstract.]
Owens, J. S. The automatic measurement of atmospheric pollution. p. 149. (Oct.) [Abstract.]
Patterson, J. Upper air observations in Canada. p. 149-150. (Oct.) [Abstract.]
Richardson, L. F. Turbulence and temperature-gradient among trees. p. 149. (Oct.) [Abstract.]
Weeks, John R. The year without a summer, 1816, and the warm winter of 1815-1816. p. 140-141. (Oct.)
Whipple, F. J. W. The diurnal variation of pressure: facts and theories. p. 148. (Oct.) [Abstract.]
American society of heating and ventilating engineers. Journal. New York. v. 30. November, 1924.
Drinker, Philip, & Thompson, Robert M. The use of Owens' jet dust counter and of electric precipitation in the determination of dust, fumes, and smokes in air. p. 695-710.
- Annalen der Hydrographie und maritimen Meteorologie. Berlin.* 25. Jahrgang. Juli 1924.
Georgii, Walter. Korrelationen der Sommertemperatur in Mitteleuropa mit den Luftdruckverhältnissen voraufgehender Jahreszeiten in Süd- und Nordamerika. p. 166-168.
- Astronomical society of the Pacific. Publication. San Francisco.* v. 36. October, 1924.
Lewis, E. P. The spectrum of the aurora and of the night sky. p. 282-286.
- Astronomie. Paris.* 38. an. Septembre, 1924.
Mémeory, Henri. À propos du changement de temps le 15 août. p. 385-387.
- Ecology. Brooklyn.* v. 5. October, 1924.
Robertson, Charles. Phenology of entomophilous flowers. p. 393-407.
- Thone, Frank. Rainproofing valves for atmometers: a résumé. p. 408-414.
- Egatae. Porto Alegre.* v. 9. 1924.
Pauwels, P. G. J. Subsidios para uma climatologia do Rio Grande do Sul. p. 212-214 (Maio e junho); p. 313-329 (Julho e agosto); p. 419-422 (setembro e outubro).
- Engineering news-record. New York.* v. 93. 1924.
Hill, C. S. Winter construction as the contractor regards it. 1. Labor and climate. Storm and frost make winter work more difficult, but eagerness for employment raises the efficiency of the workmen. p. 532-535. (Oct. 2.)
Snow removal on Fall River road across Continental Divide. Month required to open highway—hand shovels dig trench 6 ft. wide over 12-mile stretch—maximum depth of snow 19 ft. p. 550-551. (Oct. 2.)
Brockway, P. I. Floods and flood protection projects at Wichita. Three streams in city complicate problem—four floods and numerous overflows in semi-arid region, channel improvements and dikes; bridges to be rebuilt and raised—rainfall records. p. 828-832. (Nov. 20.)
- France. Académie des sciences. Comptes rendus. Paris.* t. 179. 1924.
Galissot, Ch. Dispositif simple permettant l'observation des troubles optiques de l'atmosphère; application à l'estimation de la définition des images données par les instruments. p. 459-461. (1 sept.)
Antoniadi, E.-M. Sur la décroissance retardée des neiges australes de Mars et sa coïncidence avec le minimum solaire. p. 557-559. (22 sept.)
Mathias, E. Retour sur la théorie de l'éclair fulgurant. p. 550-553. (22 sept.)
Villard, P. Sur les expériences de la Courtine. p. 617-620. (6 oct.)
- Geografiska annaler. Stockholm.* Årg. 6, H. 2. 1924.
Lindholm, F. Les systèmes nuageux et la prévision du temps en France. p. 190-196.
- Rossby, C.-G. On the origin of travelling discontinuities in the atmosphere. p. 180-189.
- Wallén, Axel. La mesure de la grandeur de l'évaporation des lacs. p. 196-198.
- Geographical review. New York.* v. 14. October, 1924.
Allix, André. Avalanches. p. 519-560.
- Reid, Harry Fielding. Antarctic glaciers. p. 603-614.
- Hemel en dampkring. Den Haag.* 22 jaarg. October 1924.
Gallé, P. H. Regenval te Amsterdam. p. 308-310.
- Pfeiffer, Ir. J. C. Iets over opstelling en behandeling van instrumenten van amateur-meteorologen. p. 298-302.
- India. Meteorological department. Memoirs. Calcutta.* v. 23, pt. 8. 1924.
- Walker, Sir Gilbert T. Frequency of heavy rain in India.
- Marine observer. London.* v. 1. November 1924.
Keeton, H. South Pacific hurricanes. p. 143-145.
Slide-scale for correcting the readings of mercurial barometers. p. 145.
- Meteorologia pratica. Montecassino.* Anno 2. Luglio-agosto 1924.
Kreda, F. La previsione della siccità. p. 145-148.
- Meteorological magazine. London.* v. 59. September 1924.
Brooks, C. E. The wet weather of April to August, 1924. p. 178-182.
- Gibblett, M. A. British association for the advancement of science. Meeting in Toronto, August 1924. p. 173-178. [Reports meteorological features.]
The Kew pattern barometer—marine type. p. 192-193.
- A new rain measure. p. 193-195.
- S., G. C. Dr. A. Crichton Mitchell. p. 186-187.
- Meteorologische Zeitschrift. Braunschweig.* Bd. 41. Oktober 1924.
Bartels, J. Zur Korrelation März-September. p. 316-317.
- Becker, E. Neuerung an Aneroidbarometern und Aneroid-barographen. p. 306-309.
- Conrad, V. Der Expektanzbegriff von Arthur Schuster. p. 299-306.
- Funk, S. Beobachtung einer Wolkentrombe. p. 320-321.
- Kassner, C. Beithermometer. p. 320. [Proposed name for attached thermometer.]
- Kerner, Fritz v. Die methodischen Fehler in der Paläoklimatologie. p. 293-298.
- Kühl, W. Rechenschieber zur Berechnung der Luftfeuchtigkeit. p. 319-320.
- Markgraf, Hans. Ein luftelektrischen Beitrag zur Zyklo-nentheorie. p. 314-316.

Meteorologische Zeitschrift—Continued.

- Markgraf, Hans. Ueber die Berücksichtigung von luftelektrischen Störungen bei Mittelbildungen. p. 313-314.
 Perleitz, P. Windbeobachtungen über dem nördlichen und südlichen Atlantischen Ozean bis 22 km Höhe. p. 317-318.
 Robitzsch, Max. Ein Feuchteschieber. p. 318-319.
 Wegner, Rudolf. Eis- und Sommertage Deutschlands. p. 309-313.
- Nature. London.* v. 14. 1924.
 Banerji, S. K. Microseisms associated with the incidence of the south-west monsoon. p. 576. (Oct. 18.)
 Grant, Kerr. Potential gradient and atmospheric pollution. p. 576. (Oct. 18.)
 Clark, J. Edmund, Margary, Ivan D., & Marshall, Richard. International cooperation in phenological research. p. 607-608. (Oct. 25.)
 Hopkins, A. D. Notes on the bioclimatic law. p. 608-609. (Oct. 25.)
 Dixey, F. Lake level in relation to rainfall and sunspots. p. 659-661. (Nov. 1.)
 The International union of geodesy and geophysics. p. 697. (Nov. 8.) [Report of Madrid meeting.]
 Mallock, A. Wind and waves. p. 679-680. (Nov. 8.)
 Shaw, Sir Napier. If the earth went dry. p. 684-687. (Nov. 8.)
- Nature. Paris.* 52 année. 8 novembre 1924.
 Bureau, Robert. Les "atmosphériques" de la T. S. F. Leurs propriétés météorologiques. p. 301-303.
 Rudaux, L. L'ouragan du 8 octobre. p. 303-304.
- Naturwissenschaften. Berlin.* 12. Jahrg. 26. September 1924.
 Brinkmann, R. Ueber Eiszeittheorien. p. 800-806.
- Philosophical magazine. London.* v. 48. November 1924.
 Morton, W. B., & Woods, Amy I. On air-waves of finite amplitude. p. 866-883.
- Physikalische Zeitschrift. Leipzig.* 25. Jahrgang, no. 18. 1924.
 Holtzmann, Mark. Eine neue Methode zur Bestimmung der Temperatur des Taupunktes, p. 443-445.
 Wigand, A. Die durchdringende Höhenstrahlung. p. 445-463. [Summary of existing knowledge, with bibliography.]
- Popular astronomy. Northfield, Minn.* v. 32. November 1924.
 King, Edward S. Spectrograms of sky polarization. p. 553. [Abstract.]
- Revue générale des sciences. Paris.* 32. an. 30 octobre 1924.
 Sayles, Robert W. Les problèmes de la paléoclimatologie. p. 573-581.
- Royal meteorological society. Quarterly journal. London.* v. 50. July 1924.
 Blackman, V. H. Atmospheric electric currents, normal and abnormal, and their relation to the growth of plants. p. 197-207.

SOLAR AND SKY RADIATION MEASUREMENTS DURING OCTOBER, 1924

By HERBERT H. KIMBALL, In Charge, Solar Radiation Investigations

For a description of instruments and exposures and an account of the method of obtaining and reducing the measurements, the reader is referred to the REVIEW for January and February, 1924, 53:42 and 113.

From Table 1 it is seen that solar radiation intensities on a horizontal surface averaged above normal at Washington, D. C., and Madison, Wis., and close to normal at Lincoln, Nebr. At Washington a radiation intensity of 1.51 gram-calories per minute per square centimeter of normal surface, measured at noon on October 13,

Royal meteorological society—Continued.

- Brownlee, John. Ultra-violet radiation and cooling power of the air. p. 252-254.
 Chapman, S. The semidiurnal oscillation of the atmosphere. p. 165-195.
 Chree, Charles. On the diurnal variation of atmospheric pressure at Eskdalemuir and Castle O'er, Dumfriesshire. p. 245-247.
 Giblett, M. A. The international free-balloon race for the Gordon Bennett cup. p. 260-267.
 Hill, Robin. A lens for whole sky photographs. p. 227-235.
 Margary, Ivan D. Glaisher stand *versus* Stevenson screen. A comparison of forty years' observations of maximum temperature, as recorded in both screens at Camden Square, London. p. 209-226.
 Mr. Richard Strachan. p. 272-273. [Obituary.]
 Penetrating radiation in the upper air. p. 243-244.
 Professor C. A. Angot. p. 270-271. [Obituary.]
 Professorship of meteorology at the Imperial college of science and technology; retirement of Sir Napier Shaw. p. 259-260.
 Russell, Spencer C. Daily well measurements during 1923 at Chilgrove, Sussex, and Detling, Kent. p. 248-249.
 Sir Gilbert Walker. p. 244.
 Whipple, F. J. W. The significance of regression equations in the analysis of upper air observations. p. 237-243.
 Winter thunderstorms. p. 258-259.
 Whitcomb, S. F. The heavy floods of May 31st and June 1st, 1924. p. 254-257.
- Royal society of London. Proceedings. London. ser. A.* v. 106. October, 1924.
 Atkinson, R. d'E. Note on Vegard's theory of the aurora. p. 429-440.
- Science. New York.* v. 60. 1924.
 Anslow, Gladys. The total ionization produced in air by electrons of various energies. p. 432-433. (Nov. 7.)
 Dall, Wm. H. Thermometer scales. p. 454-455. (Nov. 14.)
 Ozone. p. x. (Nov. 14.)
- Smithsonian institution. Washington. Annual report.* 1924.
 Douglass, A. E. Some aspects of the use of the annual rings of trees in climatic study. p. 223-239.
 Humphreys, W. J. Fog and clouds. p. 187-221.
- Società meteorologica italiana. Bollettino bimestrale.* Torino. v. 44. Luglio-settembre 1924.
 Marangoni, Carlo. Teoria vorticosa della grandine. p. 46-53.
 Pesci, Giuseppe. Abbachi psicrometrici e barometrici. p. 53-56.

SOLAR OBSERVATIONS

exceeds any radiation intensity heretofore measured at that station in October, and equals the previous maximum intensity for the year, which was measured on April 5, 1918.

Table 2 shows that the total solar and sky radiation received on a horizontal surface averaged above normal at the three stations for which normals have been determined.

Sky light polarization measurements made on nine days at Washington give a mean of 62 per cent, with a maximum of 68 per cent on the 2d. Measurements obtained on nine days at Madison give a mean of 62 per cent, with a maximum of 66 per cent on the 22d. The values for Washington are above and those for Madison are below the averages for October for the respective stations.